

**CULTURAL RESOURCES SURVEY OF THE
JOHNS ISLAND PROPERTY,
CHARLESTON COUNTY, SOUTH CAROLINA**



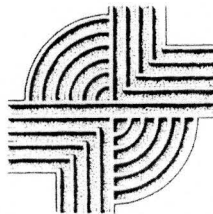
CHICORA RESEARCH CONTRIBUTION 361

CULTURAL RESOURCES SURVEY OF THE JOHNS ISLAND PROPERTY, CHARLESTON COUNTY, SOUTH CAROLINA

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August 8, 2002

This report is printed on permanent paper ∞

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ABSTRACT

This study reports on an intensive cultural resources survey of a 27.96 acre tract in the southern portion of Charleston County, on Johns Island, South Carolina. The work, conducted for Mr. Tex Small of AVTEX Commercial Properties, Inc., is meant to assist the client in complying with Section 106 of the National Historic Preservation Act and the regulations codified in 36CFR800.

The tract is to be used for the extension of the Sea Island Health Care Corporation. The survey area extends from Maybank Highway (S-700) to the west to Bohicket Road (S-20) to the east. It consists of a mixed pine and hardwood forest with areas of wetland in the northern portion of the tract.

This survey was conducted to identify and assess archaeological and historical sites which may be in the project domain. For this study an area of potential effect (APE) about 0.5 mile around the proposed tract was assumed. The proposed undertaking will require clearing, grubbing, and grading, along with the construction of both underground utilities as well as surface structures. There will likely be short-term construction impacts, including increased noise and dust levels, and increased construction related traffic. The long-term affects will primarily be limited to the study tract itself, although there is potential for visual intrusion of nearby properties. It should be noted, however, that the area is quickly being developed and the project area is already surrounded by several businesses.

Consultation with the S.C. Department of Archives and History revealed no properties in or near the project area that have been determined eligible for the National Register of Historic Places. Four historic resources, however, are located within site of the project area. Sites 297-0071 (Seabrook House), 297-0072 (Angel Oak), 297-0073 (St. Johns Episcopal Church Cemetery), and 297-0074

(Hills House) were all found during a 1989 survey (Fick et al. 1989). All four were found not eligible for inclusion on the National Register of Historic Places.

An investigation of the archaeological site files at the S.C. Institute of Archaeology and Anthropology identified one archaeological site (38CH20) within the APE. This site is difficult to assess due to the sparse amount of information provided on the site form. We know that the site is a prehistoric lithic scatter, but dates are unknown and eligibility status is indeterminate.

The archaeological survey of the tract incorporated shovel testing at 100-foot intervals on transects laid out at 100-foot intervals. All shovel test fill was screened through ¼-inch mesh and the shovel tests were backfilled at the completion of the study. In the wetland areas, no shovel tests were performed, but a pedestrian survey was still completed. A total of 105 shovel tests were excavated along 25 transect lines. Thirty-seven additional tests were excavated for the sites found.

As a result of these investigations, one historical site, 38CH1933, and one isolated find, 38CH00, was uncovered. Site 38CH1933 is a mid nineteenth century domestic site. Unfortunately, the site extends beyond the survey area, so it is unknown how much was recorded. This site has the possibility to provide information about the people in this area. The site is located directly north of the Angel Oak property and extends onto the property itself. Due to this information, this site is potentially eligible for the National Register of Historic Places.

The isolated find (38CH00) is a prehistoric orthoquartzite biface. This artifact is not diagnostic and one artifact cannot be used to answer research questions. This find is

recommended not eligible for the National Register of Historic Places.

A survey of public roads within 0.5 mile of the proposed undertaking was conducted in an effort to identify any architectural sites over 50 years old, beyond those found by the 1989 survey (Fick et al. 1989). None were found.

Finally, it is possible that archaeological remains may be encountered in the project area during clearing activities. Crews should be advised to report any discoveries of concentrations of artifacts (such as bottles, ceramics, or projectile points) or brick rubble to the project engineer, who should in turn report the material to the State Historic Preservation Office or to Chicora Foundation (the process of dealing with late discoveries is discussed in 36CFR800.13(b)(3)). No construction should take place in the vicinity of these late discoveries until they have been examined by an archaeologist and, if necessary, have been processed according to 36CFR800.13(b)(3).

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INTRODUCTION

This investigation was conducted by Dr. Michael Trinkley of Chicora Foundation, Inc. for Mr. Tex Small of AVTEX Commercial Properties, Inc. The work was conducted to assist the client comply with Section 106 of the National Historic Preservation Act and the regulations codified in 36CFR800.

The project site consists of approximately 27.96 acres of land proposed to be used for an extension of the Sea Island Health Care Corporation, located in the southern portion of Charleston County on Johns Island (Figure 1). The project is situated mostly in a mixed pine and hardwood forest, but also contains areas of wetlands.

The tract, as previously mentioned, is intended to be used for the extension of a health care facility. Landscape alteration, primarily clearing, grubbing, and grading, as well as the actual construction of underground utilities (such as storm water drainage), and the construction of parking areas and above ground structures, will cause severe damage to the ground surface and any archaeological resources that may be present in the survey area. Construction, operation, and maintenance of the facility may also have an impact on historic resources in the project area.

The project will not directly effect any historic structures (since none are located on the survey parcel), but the completed facility may detract from the visual integrity of historic properties, creating what many consider discordant surroundings. As a result, this architectural survey uses an area of potential effect (APE) about 0.5 mile radius around the proposed survey tract.

This study, however, does **not** consider any future secondary impact of the project, including increased or expanded development of this portion of Charleston County.

We were requested by Mr. Tex Small of AVTEX Commercial Properties, Inc. to provide a proposal for the survey on July 16, 2002. A proposal was sent and accepted on July 25. Investigations started shortly thereafter.

These investigations incorporated a review of the site files at the South Carolina Institute of Archaeology and Anthropology. As a result of that work, one site was found in the 0.5 mile APE. This site, 38CH20, is a prehistoric lithic scatter found by the previous owner of the property. The exact location and size of the site are unknown, so eligibility status is questionable.

The South Carolina Department of Archives and History GIS was consulted to check for any NRHP buildings, districts, structures, sites, or objects in the study area. No NRHP sites were found within a mile of the survey. A 1989 survey was performed on Johns Island and did reveal four historic resources (297-0071, 297-0072, 297-0073, and 297-0074) within the APE (Fick et al. 1989).

Archival and historical research was limited to a review of secondary sources available in the Chicora Foundation files.

The archaeological survey was conducted from August 5-6 by Mr. Tom Covington and Ms. Nicole Southerland under the direction of Dr. Michael Trinkley and revealed one site, 38CH1933, and one isolated find, 38CH00, situated within the proposed project area. Site 38CH1933 represents a mid-nineteenth century domestic site. Unfortunately the site extends beyond the scope of this survey, making assessment problematic. However, the artifacts found probably could provide some information about the people who inhabited the area. This site is potentially eligible for inclusion on the National Register of Historic Places.

The isolated find, 38CH00, does not

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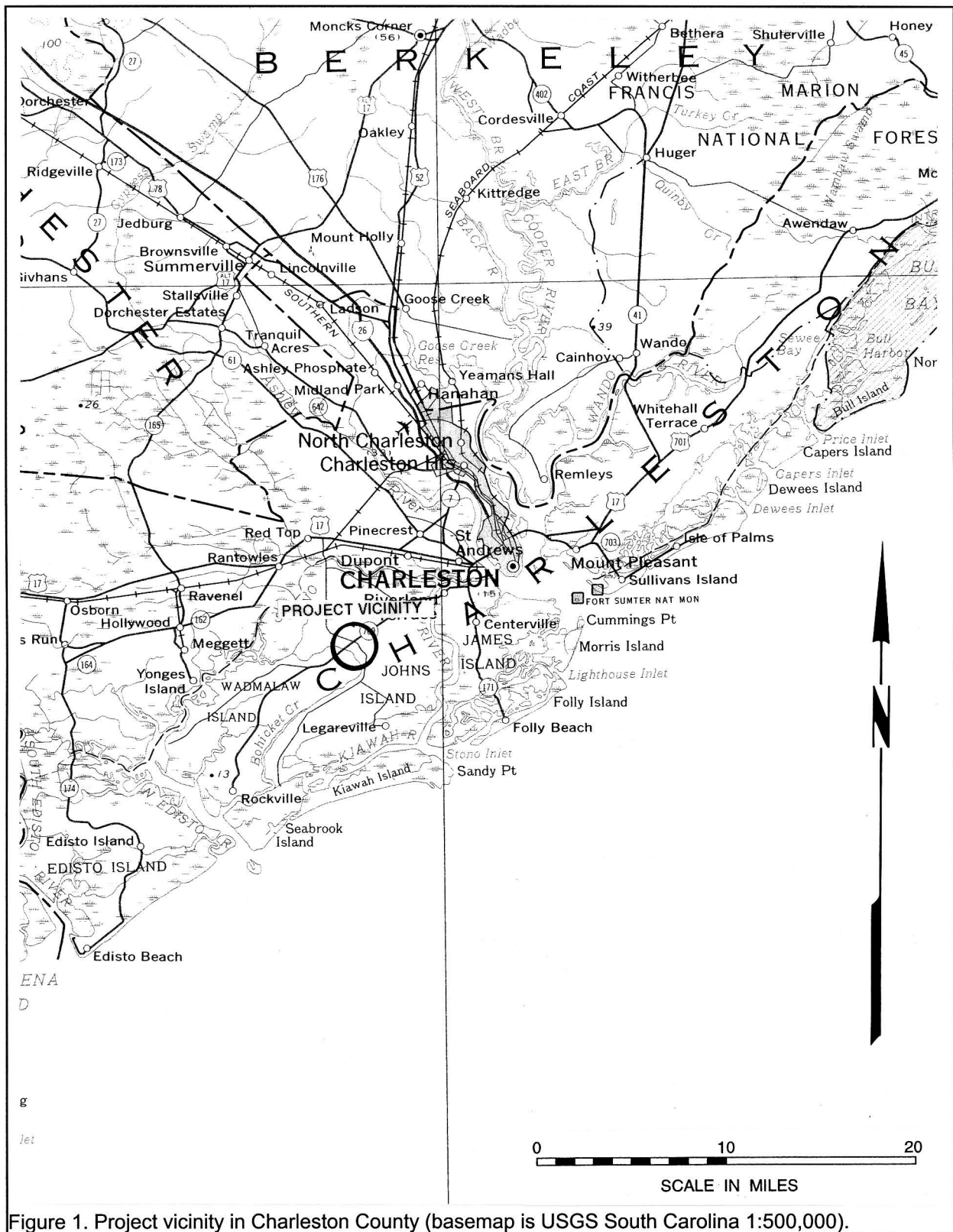


Figure 1. Project vicinity in Charleston County (basemap is USGS South Carolina 1:500,000).

INTRODUCTION

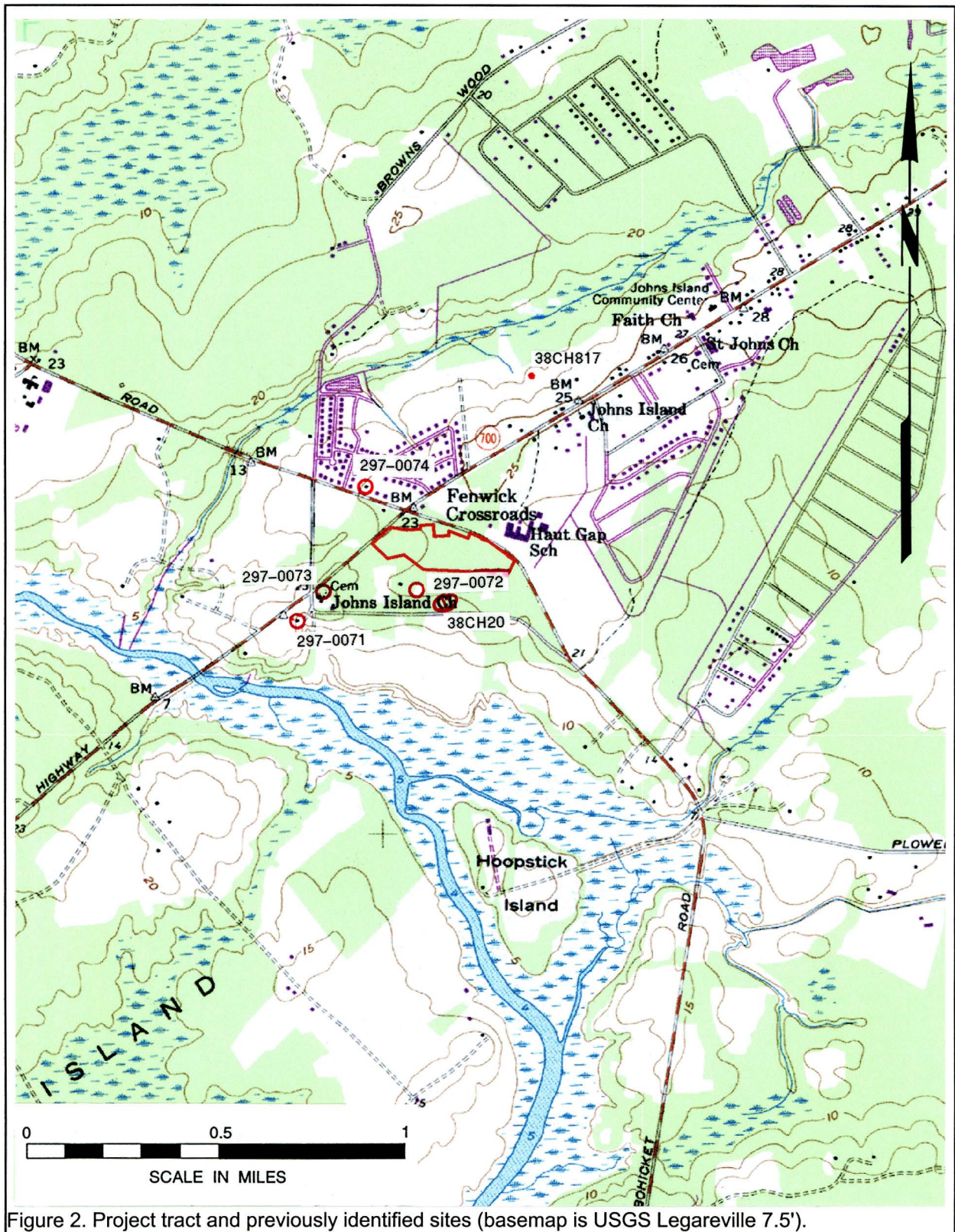


Figure 2. Project tract and previously identified sites (basemap is USGS Legareville 7.5').

contain enough information to answer research questions nor is it diagnostic. This find is recommended not eligible for inclusion on the National Register.

The architectural survey of the APE, designed to identify any structures over 50 years in age which retain their integrity revealed no such structures beyond those found by the 1989 survey (Fick et al. 1989).

Laboratory work and report production was conducted at Chicora's laboratories in Columbia, South Carolina from August 8-9. Two archaeological site forms for the site and isolated find identified during this investigation have been filed with the South Carolina Institute of Archaeology and Anthropology (SCIAA). The field notes, artifact catalog, and artifacts resulting from these investigations will be curated at SCIAA and will be maintained by that institution in perpetuity. The only photographic materials associated with this project are color prints, which are not archival. The negatives and prints for these photographs are retained by Chicora Foundation.

NATURAL ENVIRONMENT

Physiography

Charleston County is located in the lower Atlantic Coastal Plain of South Carolina and is bounded to the east by the Atlantic Ocean and a series of marsh, barrier, and sea islands (Mathews et al. 1980:133). Elevations in the County range from sea level to about 70 feet above mean sea level (AMSL).

In the project area elevations range from about 15 to 20 feet AMSL. In general, the topography slopes to the south — toward a creek that runs south of the project tract. An area of wetlands borders the northern portion of the site area.

The mainland topography consists of similar subtle ridge and bay undulations, is characteristic of beach ridge plains. Seven major drainages are found in Charleston County. Four of these, the Wando, Ashley, Stono, and North Edisto, are dominated by tidal flows and are saline. Nearby portions of the Stono were historically used for the cultivation of rice by such plantations as Fenwick Hall. The three drainages with significant freshwater flow are the Santee, forming the northern boundary of the County, the South Edisto, forming the southern boundary, and the Cooper, which bisects the County. Because of the low topography, many broad, low-

gradient interior drains are present as either extensions of the tidal rivers or as flooded bays and swales.

Geology and Soils

Coastal Plain geological formations are unconsolidated sedimentary deposits of very recent age (Pleistocene and Holocene) lying unconformably on ancient crystalline rocks (Cooke 1936; Miller 1971:74). The Pleistocene sediments are organized into topographically distinct, but lithologically similar, geomorphic units, or terraces, parallel to the coast. The project area is identified by Cooke (1936) as part of the Pamlico terrace, which includes the land between the recent shore and an abandoned shore line about 25 feet AMSL. Cooke (1936:7) notes that evidence of ancient beaches and swales can still be seen in the



Figure 3. View of pines and hardwoods in survey tract.

Pamlico formation and this likely contributed to the ridge and trough topography present in some areas of Johns Island.

Within the coastal zone the soils are Holocene and Pleistocene in age and were formed from materials that were deposited during the various stages of coastal submergence. The formation of soils in the study area is affected by this parent material (primarily sands and clays), the temperate climate, the various soil organisms, topography, and time.

The mainland soils are Pleistocene in age and tend to have more distinct horizon development and diversity than the younger soils of the sea and barrier islands. Sandy to loamy soils predominate in the level to gently sloping mainland areas. The island soils are less diverse and less well developed, frequently lacking a well-defined B horizon. Organic matter is low and the soils tend to be acidic. The Holocene deposits typical of barrier islands and found as a fringe on some sea islands, consist almost entirely of quartz sand which exhibits little organic matter. Tidal marsh soils are Holocene in age and consist of fine sands, clay, and organic matter deposited over older Pleistocene sands. The soils are frequently covered by up to 2 feet of saltwater during high tides. Historically, marsh soils have been used as compost or fertilizer for a variety of crops, including cotton (Hammond 1884:510) and Allston mentions that the sandy soil of the coastal region, "bears well the admixture of salt and marsh mud with the compost" (Allston 1854:13).

Four soil series occur in the project area: Seabrook loamy fine sand, Stono fine sandy loam, Wando loamy fine sand, and Leon fine sand (Miller 1971:61). The Seabrook soils are moderately well drained and consist of an A or Ap horizon of very dark grayish-brown (10YR3/2) loamy fine sand about 0.8 foot in depth. The underlying subsoil is a dark-brown (10YR4/3) to dark yellowish-brown (10YR4/4) sand.

In contrast, the Stono soils are very poorly drained with a seasonal high water table within a foot of the surface. The soils, typical of reduced environs, have an A horizon profile of black (10YR2/1) sand, often to a depth of 1.6 feet. Under this is a B horizon of very dark gray

(10YR3/1) soil. Wando soils are well drained soils that have an Ap horizon of dark brown (10YR4/3) loamy fine sand to a depth of 0.7 foot over a brown (7.5YR5/4) loamy fine sand up to a depth of 2.7 feet.

Leon soils were found in only a small area of the survey tract. These soils are somewhat poorly drained with an A1 layer of very dark gray (10YR3/1) fine sand to a depth of 0.8 foot over a gray (10YR6/1) coarse sand to a depth of 1.7 feet (Miller 1971).

Climate

John Lawson described South Carolina in 1700 as having, "a sweet Air, moderate Climate, and fertile Soil" (Lefler 1967:86). Of course, Lawson tended to romanticize Carolina. In December 1740 Robert Pringle remarked that Charleston was having "hard frosts & Snow" characterized as "a great Detriment to the Negroes" (Edgar 1972:282), while in May 1744 Pringle states, "the weather having already Come in very hot" (Edgar 1972:685).

The major climatic controls of the area are latitude, elevation, distance from the ocean, and location with respect to the average tracks of migratory cyclones. Charleston's latitude of 32°37'N places it on the edge of the balmy subtropical climate typical of Florida, further south. As a result, there are relatively short, mild winters and long, warm, humid summers. The large amount of nearby warm ocean water surface produces a marine climate, which tends to moderate both the cold and hot weather. The Appalachian Mountains, about 220 miles to the northwest, block the shallow cold air masses from the northwest, moderating them before they reach the sea islands (Mathews et al. 1980:46).

The average high temperature in the Charleston in July is 81°F, although temperatures are frequently in the 90s during much of July (Kjerfve 1975:C-4). Mills noted:

in the months of June, July, and August, 1752, the weather in Charleston was warmer than any of the inhabitants before had ever experienced. The mercury in the



Figure 4. View of thick second growth of pines and hardwoods.

shade often rose above 90°, and for nearly twenty successive days varied between that an 101° (Mills 1972:444).

The area normally experiences a high relative humidity, adding greatly to the discomfort. Kjerfve (1975:C-5) found an annual mean value of 73.5% RH, with the highest levels occurring during the summer. Pringle remarked in 1742 that guns "suffer'd with the Rust by Lying so Long here, & which affects any Kind of Iron Ware, much more in this Climate than in Europe" (Edgar 1972:465).

The annual rainfall in this portion of Charleston is about 49 inches, fairly evenly spaced over the year. While adequate for most crops, there may be periods of both excessive rain and drought. The Charleston area has recorded up to 20 inches of rain in a single month and the rainfall over a three month period has exceeded 30 inches no less than 9 times in the past 37 years. Likewise, periods of draught can occur and cause considerable damage to crops and livestock. Mills remarks that the "Summer of 1728 was uncommonly hot; the face of the earth was completely parched; the pools of standing water

dried up, and the field reduced to the greatest distress" (Mills 1972:447-448). Another significant historical drought occurred in 1845, affecting both the Low and Up Country.

The annual growing season is 295 days, one of the longest in South Carolina. This mild climate, adequate rainfall, and long growing season, as Hilliard (1984:13) notes, is largely responsible for the presence of many southern crops, such as cotton and sugar cane.

Floristics

The area of the study tract exhibits two major ecosystems: the maritime forest ecosystem which consists of the upland forest areas and the palustrine ecosystems which consist of essentially fresh water, non-tidal wetlands (Sandifer et al. 1980:7-9).

The maritime forest ecosystem has been found to consist of five principal forest types, including the Oak-Pine forests, the Mixed Oak Hardwood forests, the Palmetto forests, the Oak thickets, and other miscellaneous wooded areas (such as salt marsh thickets and wax myrtle thickets).

Of these the Oak-Pine forests are most common, constituting large areas of Charleston's original forest community. In some areas palmetto becomes an important sub-dominant. Typically these forests are dominated by the laurel oak with pine (primarily loblolly with minor amounts of longleaf pine) as the major canopy co-dominant. Hickory is present, although uncommon. Other trees found are the sweet gum and magnolia, with

sassafras, red bay, American holly, and wax myrtle and palmetto found in the understory.

Mills, in the early nineteenth century, remarked that:

South Carolina is rich in native and exotic productions; the varieties of its soil, climate, and geological positions, afford plants of rare, valuable, and medicinal qualities; fruits of a luscious, refreshing, and nourishing nature; vines and shrubs of exquisite beauty, fragrance, and luxuriance, and forest trees of noble growth, in great variety (Mills 1972:66).

The loblolly pine was called the "pitch or Frankincense Pine" and was used to produce tar and turpentine; the longleaf pine was "much used in building and for all other domestic purposes;" trees such as the red bay and red cedar were often used in furniture making and cedar was a favorite for posts; and live oaks were recognized as yielding "the best of timber for ship building;" (Mills 1972:66-85). Mills also observed that:

in former years cypress was much used in building, but the difficulty of obtaining it now, compared with the pine, occasions little of it to be cut for sale, except in the shape of shingles; the cypress is a most valuable wood for durability and lightness. Besides the two names we have cedar, poplar, beech, oak, and locust, which are or may be also used in building (Mills 1972:460).

The "Oak and hickory high lands" according to Mills were, "well suited for corn and provisions, also for indigo and cotton" (Mills 1972:443). The value of these lands in the mid-1820s was from \$10 to \$20 per acre, less expensive than the tidal swamp or inland swamp lands (where rice and, with drainage, cotton could be grown).

Today, virtually all of the project area's high ground evidences some form or another of disturbance. Most of the trees on the tract are young pines and hardwoods, and a large portion of the area has been affected by modern trash.

The last environment to be briefly discussed is the freshwater palustrine ecosystem, which includes all wetland ecosystems, such as the swamps, bays, savannas, pocosins, and creeks where the salinities measure less than 0.5 ppt — typical of the slough at the western edge of the survey tract. These palustrine ecosystems tend to be diverse, although not well studied (Sandifer et al. 1980:295). Many of these freshwater areas are likely associated with the various troughs scattered across the area. A number of forest types may be found in the palustrine areas which would attract a variety of terrestrial mammals. The typical vegetation might consist of red maple, swamp tupelo, sweet gum, red bay, cypress, and various hollies. Also expected in these areas would be wading birds and reptiles. It seems likely that these freshwater environs were of particular importance to the prehistoric occupants, but posed only a passing hinderance to the historic plantation owners.

PREHISTORIC AND HISTORIC BACKGROUND

Previous Research

There are, of course, a number of previously published archaeological studies available for the Charleston area to provide background (see Derting et al. 1991 for references to research in the Charleston area). Trinkley (1993), for example, provides detailed information on the history and archaeology of nearby Kiawah Island. Adams and Trinkley (1994) provide an overview of the Mullet Hall area on Johns Island, to the southwest, while Poplin (1991) explores the history and archaeology of the Gift Plantation tract to the northwest.

Prehistoric Synopsis

Several previously published archaeological studies are available for the Charleston area that provide additional background, including those previously mentioned. A considerable amount of archaeology has been conducted in the Charleston area and these works should be consulted for broad overviews.

The Paleoindian period, lasting from 12,000 to perhaps 8,000 B.C., is evidenced by basally thinned, side-notched projectile points; fluted, lanceolate projectile points; side scrapers; end scrapers; and drills (Coe 1964; Michie 1977; Williams 1968). The Paleoindian occupation, while widespread, does not appear to have been intensive. Artifacts are most frequently found along major river drainages, which Michie interprets to support the concept of an economy "oriented towards the exploitation of now extinct mega-fauna" (Michie 1977:124).

The Archaic period, which dates from 8000 to about 1000 B.C., does not form a sharp break with the Paleoindian period, but is a slow transition characterized by a modern climate and an increase in the diversity of material culture. The chronology established by Coe (1964) for the

North Carolina Piedmont may be applied with relatively little modification to the South Carolina coast. Archaic period assemblages, characterized by corner-notched and broad stemmed projectile points, are rare in the Sea Island region, although the sea level is anticipated to have been within 13 feet of its present stand by the beginning of the succeeding Woodland period (Lepionka et al. 1983:10).

To some the Woodland period begins, by definition, with the introduction of fired clay pottery about 2000 B.C. along the South Carolina coast. To others, the period from about 2500 to 1000 B.C. falls into the Late Archaic because of a perceived continuation of the Archaic lifestyle in spite of the manufacture of pottery. Regardless of the terminology, the period from 2500 to 1000 B.C. is well documented on the South Carolina coast and is characterized by Stallings (fiber-tempered) and Thom's Creek (sand or non-tempered) series pottery.

The subsistence economy during this early period on the coast of South Carolina was based primarily on deer hunting, fishing, and shellfish collection, with supplemental inclusions of small mammals, birds, and reptiles. Various calculations of the probable yield of deer, fish, and other food sources identified from shell ring sites such as Lighthouse Point on adjacent James Island, also in Charleston County on James Island, indicate that sedentary life was not only possible, but probable.

Although no shell ring sites are known from Johns Island, Edmund Ruffin, who was a careful and exacting observer, noted in 1843 the location of the Lighthouse Point shell ring on James Island and then commented, "there are two others, which have been described to me, one on John's Island, & the other on a small island in the marsh attached to Edisto" (Mathew 1992:113). The marsh ring, of course, must be the Fig Island shell ring. Unfortunately, the John's Island ring has

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Dates	Period	Sub-Period	Regional Phases		
			COASTAL	MIDDLE SAVANNAH VALLEY	CENTRAL CAROLINA PIEDMONT
1715	HIST.	EARLY	Altamaha		Caraway
1650	MISS.	LATE	Irene / Pee Dee	Rembert Hollywood	Dan River
1100		EARLY	Savannah	Lawton Savannah	
800	WOODLAND	LATE	St. Catherines / Swift Creek		
A.D.		MIDDLE	Wilmington	Sand Tempered Wilmington?	Uwharrie
B.C.			Deptford	Deptford	Yadkin
300		EARLY	Refuge		Badin
1000	ARCHAIC	LATE	Thom's Creek Stallings		
2000			Savannah River Halifax		
3000		MIDDLE	Guilford Morrow Mountain Stanly		
5000	PALEOINDIAN	EARLY	Kirk Palmer		
8000			Hardaway		
10,000			Hardaway - Dalton		
12,000			Cumberland	Clovis	Simpson

Figure 5. Generalized cultural sequence for South Carolina.

never been identified.

Toward the end of the Thom's Creek phase there is evidence of sea level change, and a number of small, non-shell midden sites are found along the coast. Apparently the rising sea

level inundated the tide marshes on which the Thom's Creek people relied.

The succeeding Refuge phase, which dates from about 1100 to 500 B.C., suggests fragmentation caused by the environmental

changes (Lepionka et al. 1983; Williams 1968). Sites are generally small and some coastal sites evidence no shellfish collection at all (Trinkley 1982). Peterson (1971:153) characterizes Refuge as a degeneration of the preceding Thom's Creek series and a bridge to the succeeding Deptford culture.

The Deptford phase, which dates from 1100 B.C. to A.D. 600, is best characterized by fine to coarse sandy paste pottery with a check stamped surface treatment. Also present are quantities of cord marked, simple stamped, and occasional fabric impressed pottery. During this period there is a blending of the Deptford ceramic tradition of the lower Savannah with the Deep Creek tradition found further north along the South Carolina coast and extending into North Carolina (Trinkley 1983).

The Middle Woodland period (ca. 300 B.C. to A.D. 1000) is characterized by the use of sand burial mounds and ossuaries along the Georgia, South Carolina, and North Carolina coasts (Brooks et al. 1982; Thomas and Larsen 1979; Wilson 1982). Middle Woodland coastal plain sites continue the Early Woodland Deptford pattern of mobility. While sites are found all along the coast and inland to the fall line, sites are characterized by sparse shell and few artifacts. Gone are the abundant shell tools, worked bone items, and clay balls. In many respects the South Carolina Late Woodland period (ca. A.D. 1000 to 1650 in some areas of the coast) may be characterized as a continuum of the previous Middle Woodland cultural assemblage.

The Middle and Late Woodland occupations in South Carolina are characterized by a pattern of settlement mobility and short-term occupations. On the southern coast they are associated with the Wilmington and St. Catherines phases, which date from about A.D. 500 to at least A.D. 1150, although there is evidence that the St. Catherines pottery continued to be produced much later in time (Trinkley 1981). On the northern coast there are very similar ceramics called Hanover and Santee.

The South Appalachian Mississippian period (ca. A.D. 1100 to 1640) is the most elaborate level of culture attained by the native

inhabitants and is followed by cultural disintegration brought about largely by European disease. The period is characterized by complicated stamped pottery, complex social organization, agriculture, and the construction of temple mounds and ceremonial centers. The earliest coastal phases are named Savannah and Irene (A.D. 1200 to 1550). Sometime after the arrival of Europeans on the Georgia coast in A.D. 1519, the Irene phase is replaced by the Altamaha phase. Altamaha pottery tends to be heavily grit tempered, the complicated stamped motifs tend to be rectilinear and poorly applied, and check stamping occurs as a minority ware. Further north, in the Charleston area, the Pee Dee or Irene ware is replaced by pottery with bolder designs, thought to be representative of the protohistoric and historic periods (South 1971).

Although there has been very little archaeological exploration of historic period Native American groups in the Charleston area, South has compiled a detailed overview of the ethnohistoric sources (South 1972).

Historic Research

Just as there are a large number of sources recounting the prehistory of the project area, the history of Charleston County has been extensively reviewed, summarized, and critiqued. There should hardly be any need to do more than point the interested reader in one or two directions for additional information and details. Simple, and readily available, summaries include *A Short History of Charleston* (Rosen 1982) and *Charleston! Charleston!* (Fraser 1989). An excellent overview has been prepared by Fick and her colleagues as part of Charleston County's historical and architectural survey (Fick 1992).

The English established the first permanent settlement in what is today South Carolina in 1670 on the west bank of the Ashley River. Like other European powers, the English were lured to the New World for reasons other than the acquisition of land and promotion of agriculture. The Lord Proprietors, who owned the colony until 1719-1720, intended to discover a staple crop whose marketing would provide great wealth through the mercantile system.

By 1680 the settlers of Albermarle Point had moved their village across the bay to the tip of the peninsula formed by the Ashley and Cooper Rivers. This new settlement at Oyster Point would become modern-day Charleston. The move provided not only a more healthful climate and an area of better defense, but:

[t]he situation of this Town is so convenient for public Commerce that it rather seems to be the design of some skillful Artist than the accidental position of nature (Matthews 1954:153).

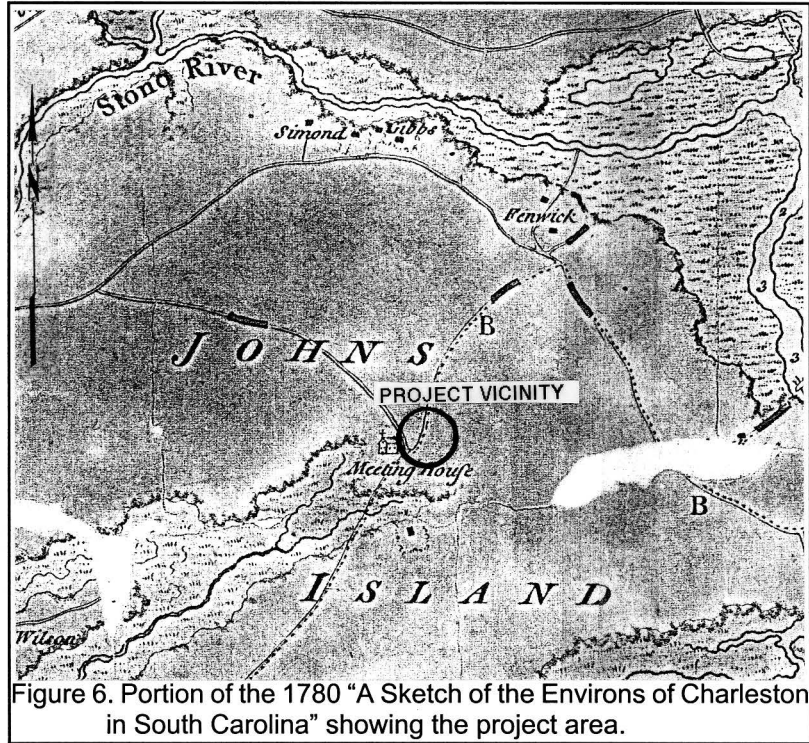


Figure 6. Portion of the 1780 "A Sketch of the Environs of Charleston in South Carolina" showing the project area.

Early settlers came from the English West Indies, other mainland colonies, England, and the European continent. It has been argued that those from the English West Indies were the most critical to the future of the colony, as they brought with them a strong agrarian concept, involving both staple crops and slave labor. These settlers were called the "Goose Creek men", many of them settling near the present town of Goose Creek (Sirmans 1966).

Early agriculture experiments which involved olives, grapes, silkworms, and oranges were less than successful. While the Indian trade was profitable to many of the Carolina colonists, it did not provide the proprietors with the wealth they were expecting from the new colony. Consequently, the cultivation of cotton, rice, tobacco, and flax were stressed as these were staple crops whose marketing the proprietors could easily monopolize.

Although introduced at least by the 1690s, rice did not become a significant staple crop until the early eighteenth century. At that time it not only provided the proprietors with an economic base the mercantile system required, but it was also to form the basis of South Carolina's

plantation system (Carpenter 1973). Over production soon followed, with a severe decline in prices during the 1740s. This economic down swing encouraged planters to diversify and indigo was introduced (Huneycutt 1949:33). Indigo complemented rice production since they were grown in mutually exclusive areas. Both, however, were labor intensive and encouraged the large scale introduction of slavery.

South Carolina's economic development during the pre-Revolutionary War period involved a complex web of interactions between slaves, planters, and merchants. By 1710 slaves outnumbered free people in South Carolina and by the 1730s slaves were beginning to be concentrated on a few, large slave-holding plantations. By the close of the eighteenth century some South Carolina plantations had a ratio of slaves to whites that was 27:1 (Morgan 1977). The Charleston area had a slave population greater than 50% of the total population by 1790. This imbalance between the races, particularly on remote plantations, may have led to greater "freedom" and mobility (Friedlander in Wheaton et al. 1983:34). By the antebellum period this trend was less extreme.

Scholars have estimated that at the end of the colonial period, over half of eastern South Carolina's white population held slaves, although few held very large numbers. Hilliard (1984:37) indicates that more than 60% of the Charleston slaveholders by 1860 owned fewer than 10 slaves.

From another perspective Zierden and Calhoun note that:

Charleston was the economic, institutional and social center of the surrounding region. The necessity of transacting business in Charleston drew planters eager to transform their crops into cash or goods . . . it [was] virtually imperative for a planter interested in society to reside in Charleston at least occasionally (Zierden and Calhoun 1984:36).

They argue that Charleston provided an opportunity for conspicuous consumption, a mechanism which allowed the display of wealth accumulated from the plantation system (with this mechanism continuing through the antebellum period). Scardaville (in Brockington et al. 1985:45) notes that the plantation system which brought prosperity through the export of staple crops also "made the colony . . . highly vulnerable to outside market and political forces."

The most obvious example of this is the economic hardship brought on by the American Revolution. Not only was the Charleston area the scene of many military actions, but Charleston itself was occupied by the British for over 2½ years between 1780 and 1782. The loss of royal bounties on rice, indigo, and naval stores caused considerable economic chaos with the eventual "restructuring of the state's agricultural and commercial base" (Brockington et al. 1985:34).

One means of "restructuring" was the emergence of cotton as the principal cash crop. Although "upland" cotton was available as early as 1733, its ascendancy was ensured by the industrial revolution, the invention of the cotton gin in 1794, and the availability of slave labor. While "Sea Island" cotton was already being efficiently

cleaned, the spread of cotton was primarily in the South Carolina interior. Consequently, Charleston benefitted primarily through its role as a commercial center.

Cotton provided about 20 years of economic success for South Carolina. during this period South Carolina monopolized cotton production with a number of planters growing wealthy (Mason 1976). The price of cotton fell in 1819 and remained low through the 1820s, primarily because of competition from planters in Alabama and Mississippi. Friedlander, in Wheaton et al. (1983:28-29) notes that cotton production in the inland coastal parishes fell by 25% in the years from 1821 to 1839, although national production increased by 123%. Production improved dramatically in the 1840s in spite of depressed prices and in the 1850s the price of cotton rose.

The Charleston area did not participate directly in the agricultural activity of the state. Scardaville (in Brockington et al. 1985:35) notes that "the Charleston area, as a result of a large urban market and a far-reaching trade and commercial network, had carved out its own niche in the state's economic system." Zierden and Calhoun remark that:

[c]ountry merchants, planters, and strangers "on a visit of pleasure" flocked to Charleston. Planters continued to establish residences in Charleston throughout the antebellum era and "great" planters began to spend increasing amounts of time in Charleston (Zierden and Calhoun 1984:44).

In spite of this appearance of grandeur, Charleston's dependence on cotton and ties to an international market created an economy vulnerable to fluctuation over which the merchants and planters had no control.

While the wealthiest farms were those on the sea islands producing cotton (such as Edisto Island where the value of the average plantation was over \$44,000), plantations in Christ Church (as well as other inland, non-cotton producing

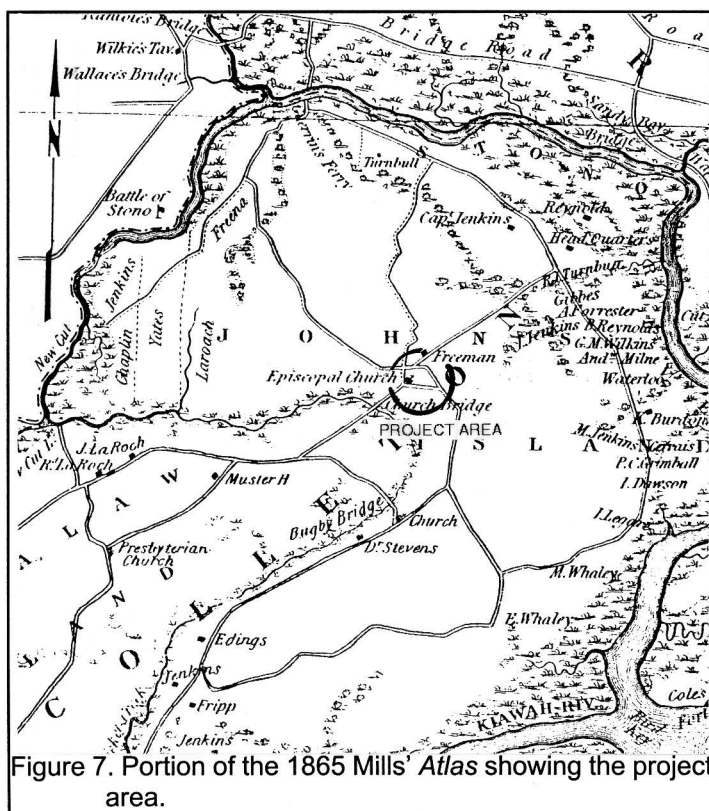


Figure 7. Portion of the 1865 Mills' Atlas showing the project area.

Christ Church Parish, about five miles north of Mount Pleasant, the Confederate forces built a line running from the headwaters of the Wando River to the Atlantic Ocean marshes.

It wasn't until 1865, at the very end of the war, that this line was "tested." A Union assault on Bull's Bay was begun on February 13, although weather, poor planning, and shallow water prevented a landing until February 17, when the troops were put ashore at Graham's Creek near Buck Hall Plantation, several miles northeast of the line. It was that same day that Confederate forces retreated from Charleston and the assault on Bull's Bay accomplished little other than preventing the Confederate troops from marching north to Georgetown (Burton 1970:316).

After the Civil War Charleston and the surrounding countryside lay in waste. Plantation houses were destroyed, the city was in near ruins, the agricultural base of slavery was destroyed, and the economic

areas) had an average value of around \$7,000 (Scardaville in Brockington et al. 1985:39).

The Charleston area response to the reduction in rice was a shift to ranching and livestock production as a substitute. Between 1850 and 1860 the value of livestock increased by 120%, corn increased by 44%, wool production increased by 126%, and the value of animals slaughtered increased from \$0 to over \$5,000 (Scardaville in Brockington et al. 1985:41).

While the fortifications and numerous battles fought around John's, James, and Folly Islands during the Civil War are well known, the other defenses of Charleston are perhaps less understood. One author has suggested that, "it is doubtful if any city in the Confederacy had more or stronger defenses than those around Charleston" (Burton 1970:132). In

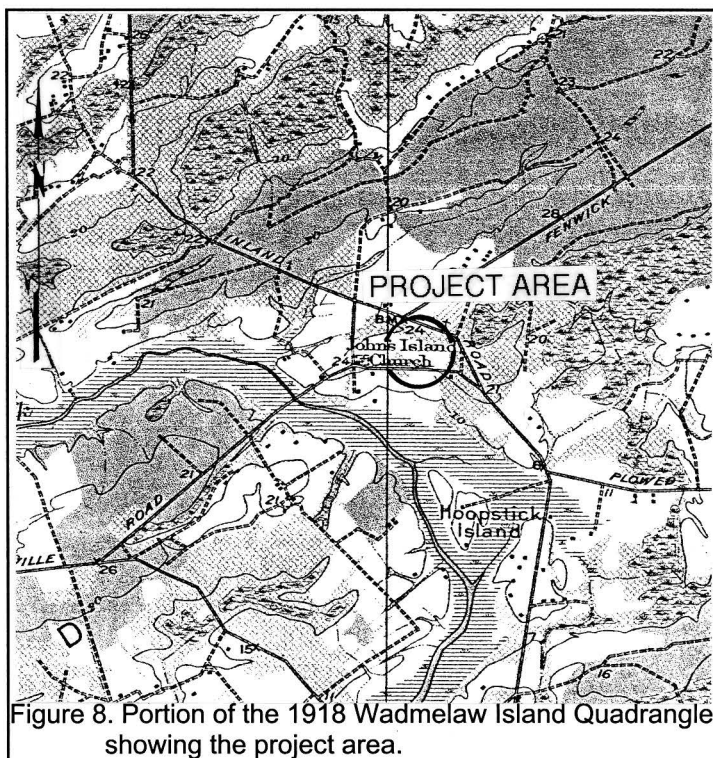


Figure 8. Portion of the 1918 Wadmelow Island Quadrangle showing the project area.

Figure 9. Portion of the 1929 Charleston County "Sanitary & Drainage Commission" map.

Figure 9. Portion of the 1929 Charleston County "Sanitary & Drainage Commission" map.

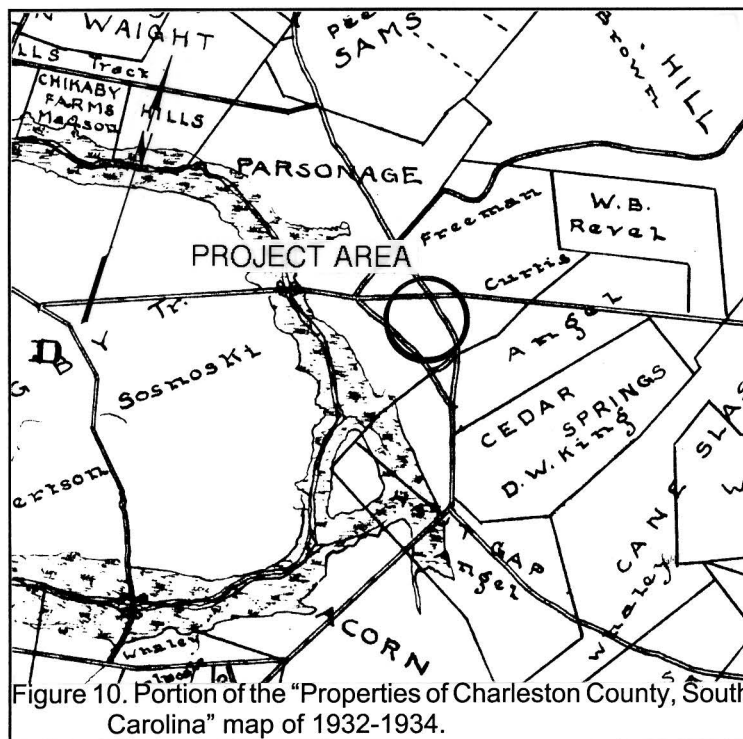


Figure 10. Portion of the "Properties of Charleston County, South Carolina" map of 1932-1934.

Where tenancy did exist, it was largely cash rental, not sharecropping, and Scardaville argues that this formed the vital link allowing black ownership (Scardaville in Brockington et al. 1985:62).

Beginning shortly after the Civil War, truck farming became one of the primary agricultural activities of area farmers. The combination of soil fertility, climate, and proximity gave truck farming an edge in the effort to supply Charleston with produce. As a result many blacks were employed as wage laborers. Produce increased from about one-quarter of the county's agricultural production in 1890 to over three-quarters by 1930 (Scardaville in Brockington et al. 1985:74). Much of this prosperity, however, disappeared during the Great Depression, when trucking in the area declined by 75%.

Tract Specific Information

One of the earliest land grants for the project area was in 1700 to Abraham Waight, who received 4,000 acres of the original 12,000 acres owned by his brother, Jacob (Jordan and Stringfellow 1998:235).

It is unclear how the land was divided after the Waight family, but by the Revolutionary War Era, the project area was in the possession of the John's Island Society House and the St. John's Anglican Church (Jordan and Stringfellow 1998:236). Between 1826 and 1836, a portion of the land still belonged to the church (now an Episcopal Church), while another portion of the land was owned by Justus Angel who married Martha Waight and received Angel Oak, located just south of the survey tract, as a wedding gift from her father Isaac Waight, great-grandson of the original owner Abraham Waight (Jordan and Stringfellow 1998:290).

In 1860, the project area was part of 150 acres owned by the Episcopal church, while the area just south was still owned by Martha Angel and her son, Isaac who had 40 slaves with 18 slave houses on about 1,000 acres (Jordan and Stringfellow 1998: 242). While it is unclear the exact property lines, in 1868, Freedmen leased a portion of the Angel's 1,000 acres of land and by 1881, Martha Angel had divided her property into five pieces of land for her family (Jordan and Stringfellow 1998:253). The 1880-1895 map shows the project area as belonging to the Episcopal Church (Jordan and Stringfellow 1998).

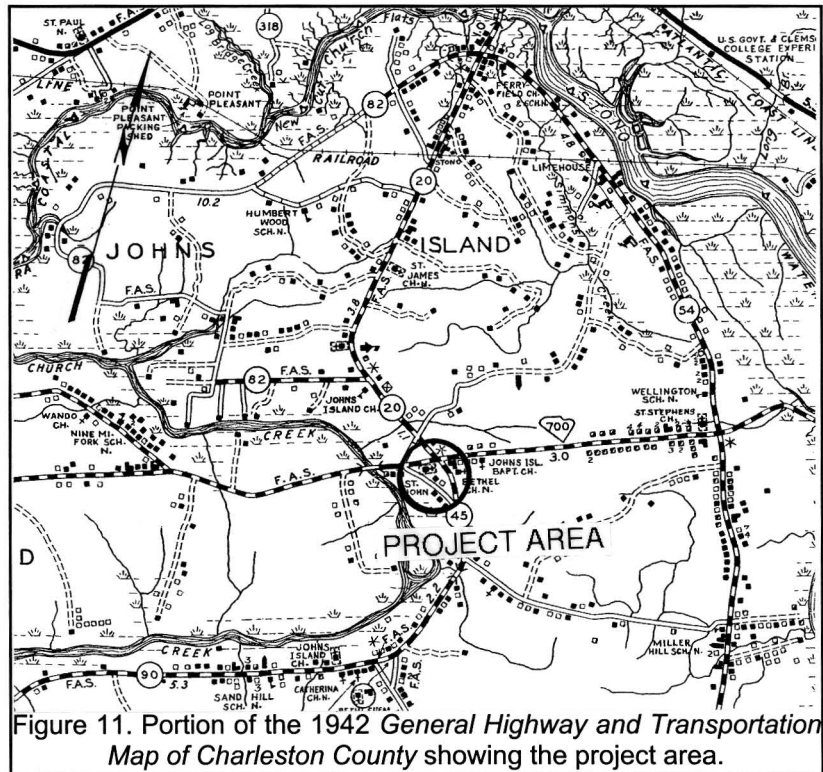


Figure 11. Portion of the 1942 *General Highway and Transportation Map of Charleston County* showing the project area.

METHODS

Archaeological Field Methods

The initially proposed field techniques involved the placement of shovel tests at 100-foot intervals along transects placed at 100-foot intervals.

All soil would be screened through ¼-inch mesh, with each test numbered sequentially by transect. Each test would measure about 1 foot square and would normally be taken to a depth of at least 1.0 foot or until subsoil was encountered. All cultural remains would be collected, except for mortar and brick, which would be quantitatively noted in the field and discarded. Notes would be maintained for profiles at any sites encountered.

Should sites (defined by the presence of three or more artifacts from either surface survey or shovel tests within a 50 foot area) be identified, further tests would be used to obtain data on site boundaries, artifact quantity and diversity, site integrity, and temporal affiliation. These tests would be placed at 25 to 50 feet intervals in a simple cruciform pattern until two consecutive negative shovel tests were encountered. The information required for completion of South Carolina Institute of Archaeology and Anthropology site forms would be collected and photographs would be taken, if warranted in the opinion of the field investigators.

These proposed techniques were implemented with few modifications. Transects were set up from the east side of the tract, heading west and shovel tests were excavated to the north until wetlands were encountered. A total of 105 shovel tests were excavated along 25 transect lines. A pedestrian survey was performed in the wetland areas.

The GPS positions were taken with a Garmin GPS 76 rover that tracks up to twelve satellites, each with a separate channel that is continuously being read. The benefit of parallel channel receivers is their improved sensitivity and

ability to obtain and hold a satellite lock in difficult situations, such as in forests or urban environments where signal obstruction is a frequent problem. This was a vital concern for the study area.

GPS accuracy is generally affected by a number of sources of potential error, including errors with satellite clocks, multipathing, and selective availability. Satellite clock errors can occur when the satellites' clock is off by as little as a millisecond, or when a slightly-askew orbit results in a distance error. Multipathing occurs when the signal bounces off trees, chain-link fences, or bodies of water. Multipathing was probably a significant source of error for this study since the site area was in a forest of pines and hardwoods. The source of most extreme GPS errors is selective availability (SA), the deliberate mistiming of satellite signals by the Department of Defense. This degradation results in horizontal errors of up to 100 m 95% of the time, although the error may be as much as 300 m. Nevertheless, selective availability has been turned off by the DOD. We have previously determined the 3D¹ and DGPS readings with the Garmin 76 were identical. Therefore, we relied on 3D navigation mode, with expected potential horizontal errors of 6 m or less.

Architectural Survey

As previously discussed, we elected to use a 0.5 mile area of potential effect (APE). The architectural survey would record buildings, sites, structures, and objects which appeared to have been constructed before 1950. Typical of such projects, this survey recorded only those which

¹A basic requirement for GPS position accuracy is having a lock on at least four satellites, which places the receiver in 3D mode. This is critical – as an example, positions calculated with less than four satellites can have horizontal errors in excess of a mile, or over 1,600 m.

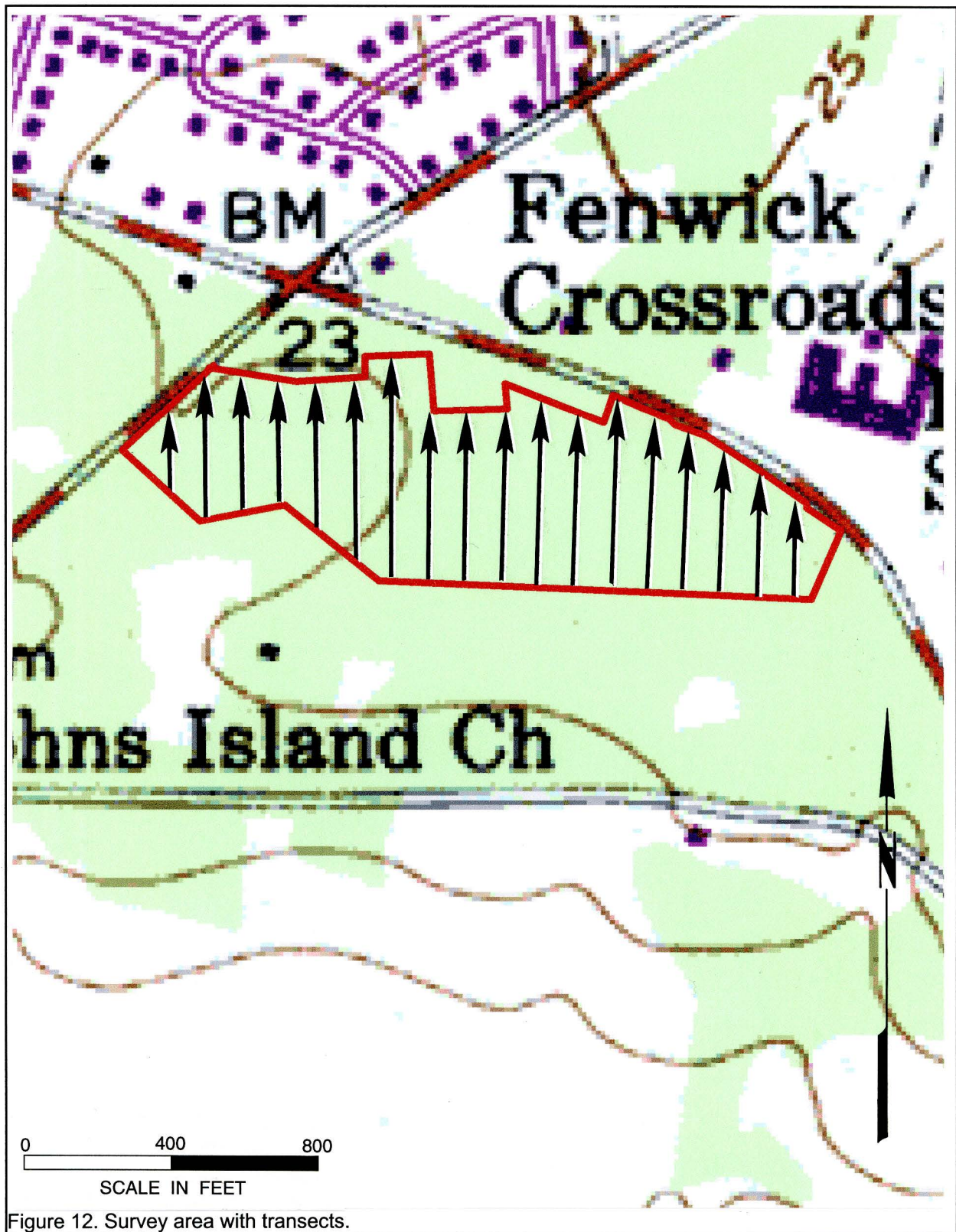


Figure 12. Survey area with transects.

have retained "some measure of its historic integrity" (Vivian n.d.:5) and which were visible from public roads.

For each identified resource we would complete a Statewide Survey Site Form and at least two representative photographs were taken. Permanent control numbers would be assigned by the Survey Staff of the S.C. Department of Archives and History at the conclusion of the study. The Site Forms for the resources identified during this study would be submitted to the S.C. Department of Archives and History.

Site Evaluation

Archaeological sites will be evaluated for further work based on the eligibility criteria for the National Register of Historic Places. Chicora Foundation only provides an opinion of National Register eligibility and the final determination is made by the lead federal agency, in consultation with the State Historic Preservation Officer at the South Carolina Department of Archives and History.

The criteria for eligibility to the National Register of Historic Places is described by 36CFR60.4, which states:

the quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and

a. that are associated with events that have made a significant contribution to the broad patterns of our history; or

b. that are associated with the lives of persons significant in our past; or

c. that embody the distinctive characteristics of a type, period,

or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

d. that have yielded, or may be likely to yield, information important in prehistory or history.

National Register Bulletin 36 (Townsend et al. 1993) provides an evaluative process that contains five steps for forming a clearly defined explicit rationale for either the site's eligibility or lack of eligibility. Briefly, these steps are:

- identification of the site's data sets or categories of archaeological information such as ceramics, lithics, subsistence remains, architectural remains, or sub-surface features;

- identification of the historic context applicable to the site, providing a framework for the evaluative process;

- identification of the important research questions the site might be able to address, given the data sets and the context;

- evaluation of the site's archaeological integrity to ensure that the data sets were sufficiently well preserved to address the research questions; and

- identification of important research questions among all of those which might be asked and answered at the site.

This approach, of course, has been developed for use documenting eligibility of sites being actually nominated to the National Register of Historic Places where the evaluative process

must stand alone, with relatively little reference to other documentation and where typically only one site is being considered. As a result, some aspects of the evaluative process have been summarized, but we have tried to focus on an archaeological site's ability to address significant research topics within the context of its available data sets.

For architectural sites the evaluative process was somewhat different. Given the relatively limited architectural data available for most of the properties, we focus on evaluating these sites using National Register Criterion C, looking at the site's "distinctive characteristics." Key to this concept is the issue of integrity. This means that the property needs to have retained, essentially intact, its physical identity from the historic period.

Particular attention would be given to the integrity of design, workmanship, and materials. Design includes the organization of space, proportion, scale, technology, ornamentation, and materials. As *National Register Bulletin* 36 observes, "Recognizability of a property, or the ability of a property to convey its significance, depends largely upon the degree to which the design of the property is intact" (Townsend et al. 1993:18). Workmanship is evidence of the artisan's labor and skill and can apply to either the entire property or to specific features of the property. Finally, materials — the physical items used on and in the property — are "of paramount importance under Criterion C" (Townsend et al. 1993:19). Integrity here is reflected by maintenance of the original material and avoidance of replacement materials.

Laboratory Analysis

The cleaning and analysis of artifacts was conducted in Columbia at the Chicora Foundation laboratories. These materials have been catalogued and accessioned for curation at the South Carolina Institute of Archaeology and Anthropology, the closest regional repository. The site forms for the identified archaeological sites have been filed with the South Carolina Institute of Archaeology and Anthropology. Field notes and photographic materials have been prepared for curation using archival standards and will be

transferred to that agency as soon as the project is complete.

Analysis of the collections followed professionally accepted standard with a level of intensity suitable to the quantity and quality of the remains. In general, the temporal, cultural, and typological classifications of historic remains follow such authors as Price (1970) and South (1977). Prehistoric materials were defined by such authors as Yohe (1996), Blanton et al. (1986), and Oliver et al. (1986).

RESULTS OF SURVEY

Introduction

As a result of this cultural resources survey one archaeological site (38CH1933) and one isolated find (38CH00) was identified. Site 38CH1933 consists of a mid-nineteenth century domestic site. This site has the potential to provide information about the former settlement in the area. The site does extend off the current survey area, so it is impossible to evaluate the entire site. It is therefore recommended potentially eligible for the National Register.

The isolated find, 38CH00, an orthoquartzite biface, is not defined as a site, nor is it able to answer any significant research questions. It is recommended not eligible for the National Register.

The architectural survey did not identify any structures or other resources beyond those identified by the 1989 survey (Fick et al. 1989). However, one resource, 297-0072, Angel Oak, is located directly next to the survey area and has the potential to be affected by the construction.

Archaeological Resources

38CH1933

Site 38CH1933 consists of a surface and subsurface scatter of mid-nineteenth century remains and a small prehistoric component. It is situated on an interior plain at an elevation of about 20 feet AMSL. The intersection of Church Creek with Bohicket Creek is to the southwest of the survey area. The topography in the area is fairly flat with land sloping slightly south toward the intersection of

Bohicket and Church Creeks.

Vegetation in the area consist of mixed pines and hardwoods. A 1918 topographic map (Figure 15) shows the site area logged. Even today, the pines and hardwoods in the area are small, signifying only a few years of growth.

Only one artifact was found on the surface, a piece of salt-glazed stoneware, but the site was initially discovered through shovel testing with the first positive test at Transect 15, Shovel Test 1. Shovel tests were then performed at 50-foot intervals along the cardinal directions until two negative tests were found in each direction. Unfortunately, the property edge to the south and to the west were encountered, which prevented testing beyond the boundary, but it is likely that the site extends into these areas.

A total of 45 shovel tests were excavated with 15 (33%) positive. The artifacts encountered

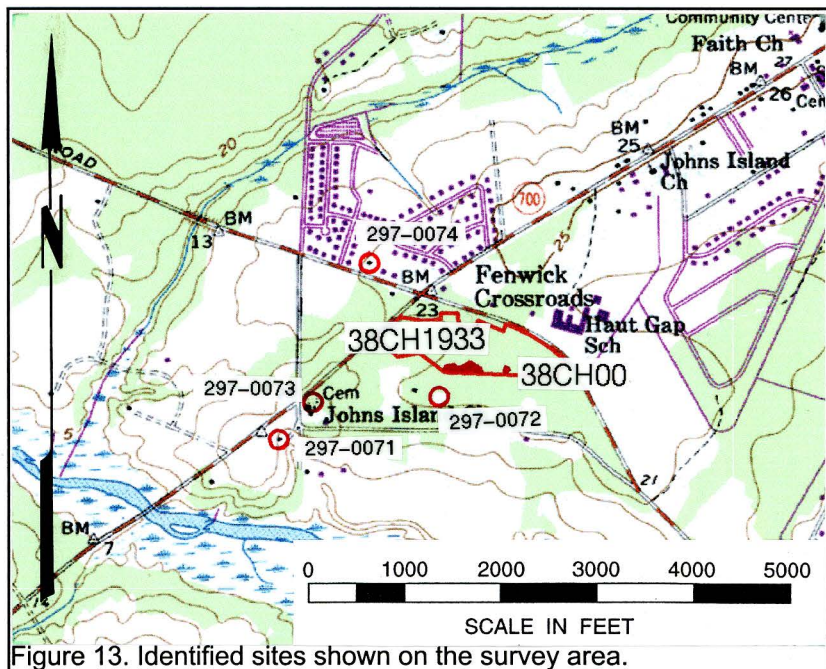


Figure 13. Identified sites shown on the survey area.

CULTURAL RESOURCES SURVEY OF THE JOHNS ISLAND PROPERTY

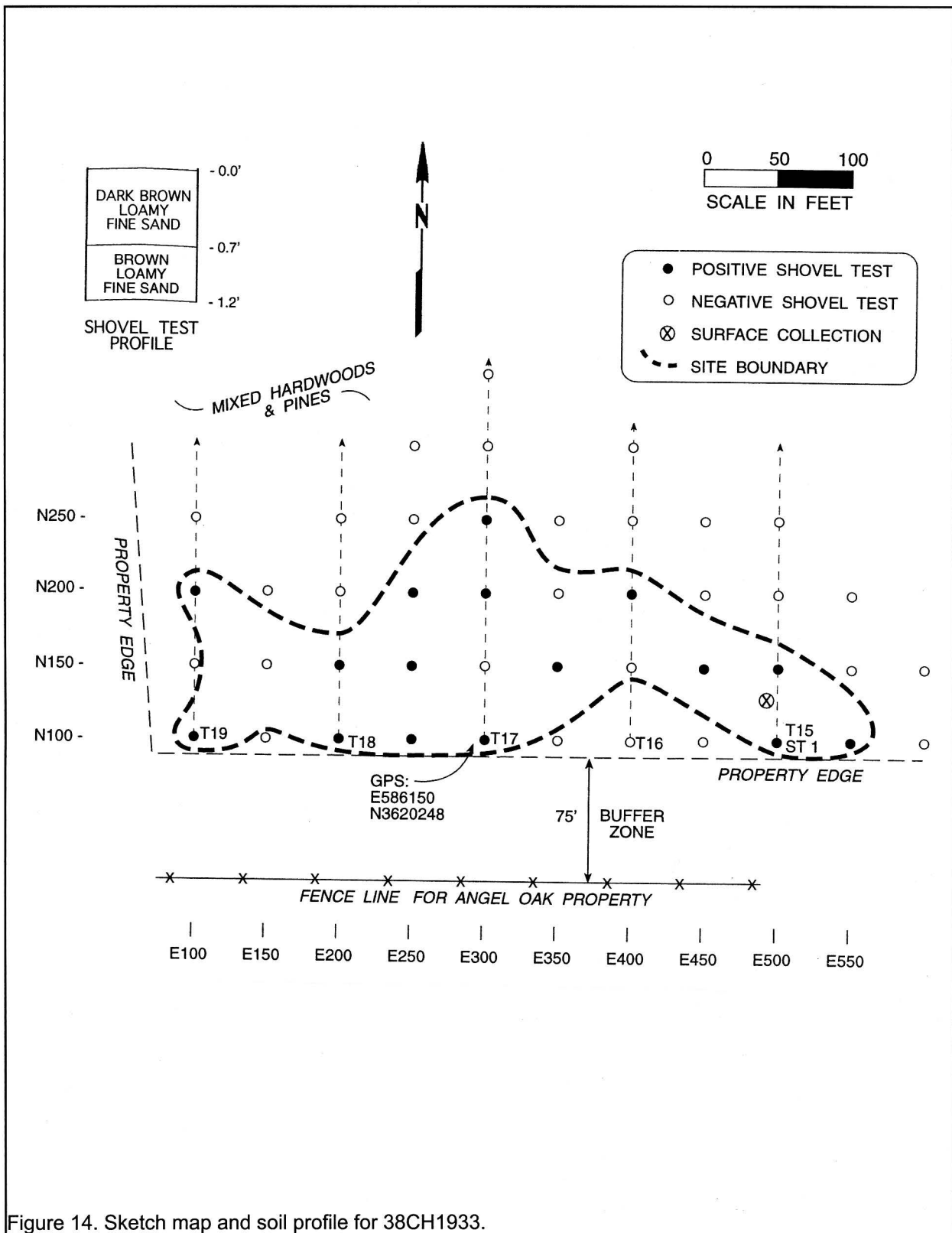


Figure 14. Sketch map and soil profile for 38CH1933.

RESULTS OF SURVEY

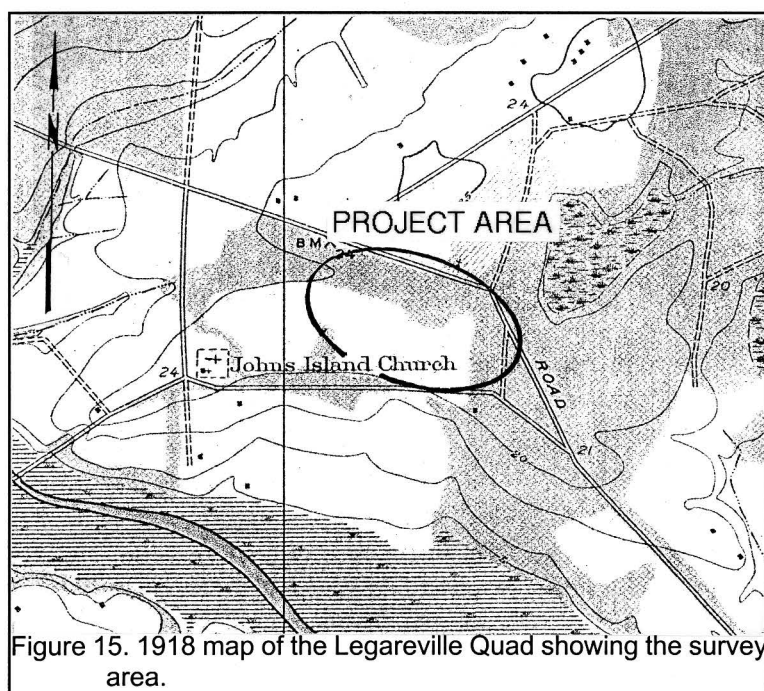


Figure 15. 1918 map of the Legareville Quad showing the survey area.

the southern and western property edge prevented further testing. The site's northern boundary blended into modern trash, but 38CH1933 only reached 150 feet north into the current survey area.

An estimated site dimension for the portion of the site in the current survey area is 450 feet by 150 feet, but it likely extends onto the current Angel Oak property. Several bricks were found, but no distinct brick piles or other features were noted. A central UTM coordinate is E586150 N3620248 (NAD27 datum).

According to the historic plat maps for the site area, the land has belonged to the church since the Revolutionary War era (Jordan and Stringfellow 1998). It is possible that the artifacts found in the area might represent the clergyman's settlement.

Further research may provide some details.

at the site represent a mid-nineteenth century domestic site with a small unidentified prehistoric component (Table 1). As previously mentioned,

There are a number of significant

Table 1.
Artifacts found at 38CH1933

		N100	N100	N100	N100	N100	N100	N150	N150	N150	N150	N200	N200	N200	N200	N250	Surface	Total
		E100	E200	E250	E300	E500	E550	E200	E250	E350	E450	E500	E100	E250	E300	E400	E300	
Kitchen	Creamware, undec.			1														
	Whiteware, undec.					1					1						1	
	Whiteware, annular	1			1								1					
	Whiteware, tinted annular					1												
	Whiteware, blue edge									2								
	Stoneware, salt-glaze																	1
	Colonoware			1														
	Glass, brown												1					
Total Kitchen								1	1	1	1					1		19
Architecture	White porcelain, industrial													1				
	Nail, machine cut									1								2
Total Architecture																		2
Tobacco	Pipe stem			1														
	Pipe bowl	1																
Total tobacco																		2
Activities	Slate														1			
	Bone								1									2
Total activities																		2
Prehistoric	UID pot sherd						1			1		1						3
																		28
Total prehistoric																		3
Total																		28

research questions appropriate for a mid-nineteenth century settlement on Johns Island. The 1932-1934 property map of the area (see Figure 10) is unclear as to who the property belongs to -- the church, possibly a freedmen village, or even part of the Angel family property. Further documentary research may provide more information on the land divisions.

The majority of the artifacts found represent a domestic site. While only one piece of faunal material was found, it is still possible that the site will be able to address dietary issues. As for the ceramic, creamware was uncommon for both freedmen and clergymen, making the question of land boundaries more of an issue.

The integrity of the site appears to be relatively intact, although as previously mentioned, no intact features were found, which may either represent the results of logging in the area or that the actual structures are located off the property. In either case, additional excavations would be necessary to answer this question. Site 38CH1933 has the potential to provide much information about the settlement on Johns Island and is therefore recommended potentially eligible for inclusion on the National Register of Historic Places.

38CH00

Site 38CH00 is a subsurface find of a single orthoquartzite biface found on an interior plain at an elevation of about 20 feet AMSL. This isolated find is located about 3,000 feet north of Bohicket Creek/Church Creek. Topography in the area is fairly level with the land slightly sloping toward the creeks.

Typical vegetation in the project area is mixed pines and hardwoods, although much of the

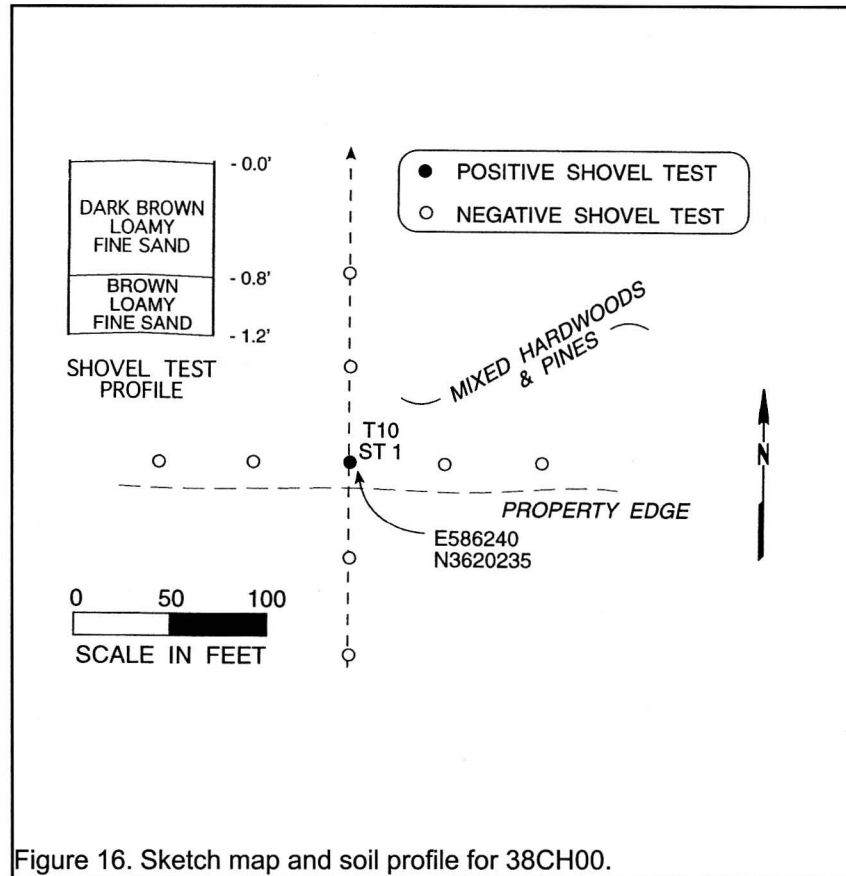


Figure 16. Sketch map and soil profile for 38CH00.

area surrounding the survey area has been developed, clearing much of the wooded areas. A central UTM coordinate for 38CH00 is E586240 N3620235 (NAD27 datum). The find is accessible from Angel Oak Road, 400 feet south.

Shovel tests were completed at the originally proposed 100-foot intervals, with Transect 10, Shovel Test 1 positive. Close interval testing was performed at 50-foot intervals along the cardinal directions until two consecutive tests were found. Although the positive test was on the southern boundary line, two additional tests were performed south onto the buffer, but both were negative. Eight additional tests were excavated, but all were negative. The soils resemble Wando loamy fine sands which have an Ap horizon of dark brown (10YR4/3) loamy fine sand to a depth of 0.7 foot over a brown (7.5YR5/4) loamy fine sandy which occurs to a depth of 2.7 feet.



Figure 17. View of the Johns Island Episcopal Church Cemetery (297-0073).

structures, or objects in the 0.5 mile APE. There are, however, several resources found not eligible which are located close to the project area.

The Johns Island Episcopal Church Cemetery (297-0073) is located just west of the survey area. The actual structure is a revival of the original 1734 church, which burned down, but the church, as of the 1989 survey, was not old enough to be considered for the National Register of Historic Places (Fick et al. 1989). The cemetery, however, retains its historic integrity. The church,

As previously mentioned, the only specimen recovered was an undiagnostic orthoquartzite biface. This specimen cannot address significant research questions. As a result, we recommend the find not eligible for the National Register. No additional management activities are necessary, pending the review of the State Historic Preservation Office.

Architectural Resources

There are no previously recorded National Register buildings, districts,



Figure 18. View of Angel Oak (297-0072).

along with several more modern structures belonging to the church, stand between the cemetery and the survey tract. Consequently, the proposed project is not likely to affect the cemetery.

The only historic resource which may be visually impacted by the current survey is the Angel Oak (297-0072). This property, found not eligible during the 1989 survey (Fick et al. 1989), is located just south of the survey area and is shielded only by a chain link fence. Although the area surrounding the study tract is developed, the current tract will be the closest commercial development to Angel Oak.

CONCLUSIONS

This study involved the examination of approximately 27.96 acres of land on Johns Island, South Carolina. The project area is to be used for the extension of the Sea Island Health Care Corporation. This work, conducted for AVTEX Commercial Properties, Inc. examined archaeological sites and cultural resources found on the proposed project area and is intended to assist this organization in complying with their historic preservation responsibilities.

As a result of this investigation, one archaeological site, 38CH1933 and one isolated find, 38CH00, were identified. 38CH1933 represents a mid-nineteenth century domestic site. This site has the possibility to provide information about the people in this area. The site is located directly north of the Angel Oak property and extends onto the property itself. Due to this information, this site is potentially eligible for the National Register of Historic Places. The isolated find 38CH00 is a single orthoquartzite biface and does not contain enough information to answer research questions, therefore we recommend the find not eligible for the National Register.

A survey of historic sites was conducted within a 0.5 mile APE. Although no sites were found within the APE to be eligible for inclusion on the National Register of Historic Places, it is possible that some resources may be affected by the proposed undertaking. In particular, Angel Oak, 297-0072, located about 200 feet south of the project area, could be affected.

It is possible that archaeological remains may be encountered during construction activities. As always, contractors should be advised to report any discoveries of concentrations of artifacts (such as bottles, ceramics, or projectile points) or brick rubble to the project engineer, who should in turn report the material to the State Historic Preservation Office, or Chicora Foundation (the process of dealing with late discoveries is discussed in 36CFR800.13(b)(3)). No further land altering activities should take place in the vicinity of these discoveries until they have been examined by an archaeologist and, if necessary, have been processed according to 36CFR800.13(b)(3).

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